

REMARKS

Claims 1-11 are pending in the application. A minor amendment is proposed to claim 9. Reconsideration and withdrawal of the final rejection are respectfully requested.

Applicant submits herewith a new Abstract in order to obviate the objection noted in the Office Action.

In the Office Action, independent system claim 1, and independent method claim 9, were rejected as obvious over SETO (2002/0152015) in view of CHAKRABORTY et al. (US 5,839,534). Applicant respectfully traverses this rejection.

Applicant's system claim 1 is provided to control brakes of a commercial vehicle. The system includes an adaptive distant regulation and/or driving speed device, i.e., in other words an intelligent system such as a known ACC system. Claim 1 also requires an electronically controlled brake system, such as an EBS system for commercial vehicles, which is designed to distribute braking force between a friction brake and an additional retarding brake (see ¶ 3). Applicant's system advantageously utilizes an urgency signal from the ACC system to control the distribution of the braking force to the friction brake and the retarding brake in accordance with the EBS system. Specifically, claim 1 recites "wherein the electronically controlled brake system distributes the desired amount of braking force to the friction brake system and the retarding brake

based upon the urgency signal". That urgency signal is modulated by the adaptive distance regulation and/or driving speed device, i.e., the ACC system.

Applicant's background of the invention acknowledges that ACC systems, which modulate an urgency signal, and EBS systems, which "blend" in a time-dependent manner the transfer of braking force between the friction brake and retarding brake are known. (See ¶¶s 2 and 3).

The so-called brake "blending" function (also called "endurance brake integration" or "retarder blending") effectively distributes the braking force between endurance brakes, such as retarders, engine brakes, etc., and foundation brakes, such as pneumatic disc brakes, in accordance with a fixed scheme. That scheme utilizes as much braking force as is possible from the endurance brakes, which are "wear resistant", with the remaining necessary brake force desired from the foundation brakes. Such a fixed brake force distribution scheme is not suitable for ACC and other driver assistance systems. Those systems sometimes require very fast reaction (the low dynamics of the endurance brakes must be compensated by the fast reacting foundation brakes) but, most of the time, they attempt to avoid lining wear (foundation brakes shall only be used if the endurance brakes are not capable of providing the desired deceleration).

In view of the above, Applicant's invention is directed toward novelly influencing the brake force distribution within the EBS system depending upon

an urgency value generated and sent by the adaptive distance regulation and/or driving speed system, i.e., the ACC system.

By contrast, SETO is only directed toward an ACC system that operates or addresses a “plurality of braking-and-driving force control systems” (see claim 1). SETO addresses one “braking-and-driving force control system” for accelerating the vehicle, i.e., the engine, and another “braking-and-driving force control system” for decelerating the vehicle, i.e., engine/friction brakes. This operation conforms generally to that of every ACC system on the market. No where does SETO disclose using a hazard based urgency signal to influence the brake blending of an EBS system, which EBS systems are now state of the art in commercial vehicles.

In the Office Action, the Examiner argues that Step 006 shown in Figure 2 and described in ¶¶s 31 and 32 provide a modulated urgency signal that controls an EBS system. Applicant respectfully submits that SETO does not provide an EBS system, nor does SETO suggest or hint at controlling the distribution or “blend” of an EBS system based on an urgency signal from an ACC system. The Examiner’s reference to the brake-fluid pressure control system 5 as being an EBS system is not supported in SETO, nor would it be considered an EBS system to those of ordinary skill in this art. EBS systems are well known and, as noted above, the brake blending functions thereof are traditionally not suitable for use with ACC and other driver assistance systems. Regarding Step S006 in Figure 2, this step merely shifts between the “braking-and-driving force control”

systems traditionally used with an ACC system, such as the engine control system 6 and the brake-fluid pressure control system 5 depending upon whether a preceding vehicle is present or not.

Reiterating, nothing in SETO discloses or suggests Applicant's claimed distribution by an EBS system of "the desired amount of braking force to the friction brake system and the retarding brake based upon the urgency signal" from the "adaptive distance regulation and driving speed device".

Regarding CHAKRABORTY, this reference merely describes a way for ACC systems to address engine control systems. There is absolutely no mention of any brake blending via an EBS system, nor the use of an urgency value from an ACC system to control the distribution of such a brake blending. In view of the foregoing, neither SETO nor CHAKRABORTY alone, or in combination, disclose, suggest or even hint at using an urgency signal to influence the strategy of the brake blending function of modern EBS systems. As such, Applicant respectfully submits claim 1, which recites an "electronically controlled brake system designed to distribute a desired amount of braking force to a friction brake system and an additional active retarding brake", and to do so "based upon the urgency signal" is patentable over CHAKRABORTY in view of SETO.

Similarly, Applicant's independent method claim 9 recites the act of "distributing a desired amount of braking force to a friction brake system and an additional active retarding brake as a function of the urgency signal using an electronically controlled brake system". For the foregoing reasons, Applicant

respectfully submits claim 9 is also patentable over CHAKRABORTY in view of SETO.

Finally, Applicant's dependent claims 2-8 and 10-11, respectively depend from independent claims 1 and 9 and are also submitted to be separately patentable. In particular, dependent claims 5, 6 and 11 specify the manner of distributing or blending the braking force between the friction brake and retarding brake based upon the urgency values. As neither CHAKRABORTY nor SETO disclose and/or suggest an EBS system for blending the braking force, let alone one that does so based upon an urgency signal from an ACC system, Applicant respectfully submits claims 5, 6 and 11 are separately patentable over CHAKRABORTY in view of SETO.

In view of the foregoing, Applicant respectfully requests that the final rejection of claims 1-11 be withdrawn and that these claims be passed to issuance.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

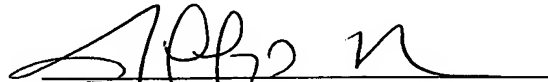
If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and

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Respectfully submitted,

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Jeffrey D. Sanok
Registration No. 32,169

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844

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